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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,266	03/18/2004	Kee Yean Ng	70030847-1	5376

57299 7590 08/14/2006  
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EXAMINER

WALFORD, NATALIE K

ART UNIT PAPER NUMBER

2879

DATE MAILED: 08/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/803,266

Applicant(s)

NG, KEE YEAN

Examiner

Natalie K. Walford

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

The Amendment, filed on May 19, 2006, has been entered and acknowledged by the Examiner.

Claims 1-20 are pending in the instant application.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi et al. (US PUB 2002/0043926).

Regarding claim 1, Takahashi discloses a device (FIG. 1, item 1) for emitting composite output light, the device including a light source (FIG. 1, item 10) that emits original light, the light source including a fluorescent layer (FIG. 6A, item 37) having a property to convert some of the original light into first converted light (page 4, paragraph 62); and a wavelength-conversion region (FIG. 1, item 35) optically coupled to the light source to receive some of the original light and the first converted light (page 6, paragraph 94), the wavelength-conversion region including a fluorescent material (FIG. 1, item 36) having a property to convert some of the original light into second converted light, the original light (page 6, paragraph 94), the first light and the second converted light being components of the composite output light.

Regarding claim 2, Takahashi discloses the device of claim 1 wherein the light source is a light emitting diode die and wherein the fluorescent layer is a substrate of the light emitting diode die (FIG. 6A).

Regarding claim 3, Takahashi discloses the device of claim 1 wherein the fluorescent material of the wavelength-conversion region includes at least one of fluorescent organic dye, inorganic phosphor and nano-phosphor (page 5, paragraph 82).

Regarding claim 4, Takahashi discloses the device of claim 1 wherein the fluorescent material of the wavelength-conversion region includes fluorescent particulates (FIG. 1, item 36) to scatter the original light and the first converted light that propagate through the wavelength-conversion region.

Regarding claim 5, Takahashi discloses the device of claim 1 wherein the wavelength-conversion region is configured to substantially enclose the light source over a surface on which the light source is positioned (FIG. 1).

Regarding claim 6, Takahashi discloses the device of claim 5 wherein the wavelength-conversion region is positioned on the light source such that the light source is covered by the wavelength-conversion region (FIG. 1).

Regarding claim 7, Takahashi discloses the device of claim 1 wherein the wavelength-conversion region is configured as a planar layer positioned over the light source (FIG. 1).

Regarding claim 8, Takahashi discloses a method for emitting composite output light, the method including: generating original light within a light source (FIG. 1, item 10); converting some of the original light into first converted light within the light source (page 4, paragraph 62); converting some of the original light into second converted light outside of the light source (page

6, paragraph 94); and emitting the original light, the first converted light and the second converted light as components of the composite output light (page 6, paragraph 94).

Regarding claim 9, Takahashi discloses the method of claim 8 wherein the generating of the original light includes generating the original light within an active layer of a light emitting diode die (page 1, paragraph 15).

Regarding claim 10, Takahashi discloses the method of claim 9 wherein the converting of the original light into the first converted light includes converting the original light into the first converted light at a fluorescent substrate of the light emitting diode die (page 1, paragraph 14).

Regarding claim 11, Takahashi discloses the method of claim 8 wherein the converting of the original light into the second converted light includes converting the original light into the second converted light (page 6, paragraph 94) at a wavelength-conversion region optically coupled to the light source (FIG. 1, items 35 and 10).

Regarding claim 12, Takahashi discloses the method of claim 11 wherein the converting of the original light into the second converted light includes converting the original light into the second converted light using fluorescence (page 3, paragraph 56).

Regarding claim 13, Takahashi discloses the method of claim 12 wherein the converting of the original light into the second converted light includes scattering the original light and the first converted light propagating through the wavelength-conversion region (page 6, paragraph 94).

Regarding claim 14, Takahashi discloses a device (FIG. 1, item 1) for emitting composite output light, the device including: a semiconductor die (FIG. 1, item 10) that emits first light of a first peak wavelength, the semiconductor die including a fluorescent substrate (FIG. 6A, item 37)

having a property to convert some of the first light into second light of a second peak wavelength (page 4, paragraph 62); and a wavelength-conversion region (FIG. 1, item 35) positioned to receive at least some of the first light and the second light, the wavelength-conversion region having a property to convert some of the first light into third light of a third peak wavelength (page 6, paragraph 94), the first light the second light and the third light being components of the composite output light (page 6, paragraph 94).

Regarding claim 15, Takahashi discloses the device of claim 14 wherein the semiconductor die is a light emitting diode die (page 2, paragraph 48 thru page 3, paragraph 50).

Regarding claim 16, Takahashi discloses the device of claim 14 wherein the wavelength-conversion region includes at least one of fluorescent organic dye, inorganic phosphor and nano-phosphor (page 5, paragraph 82).

Regarding claim 17, Takahashi discloses the device of claim 14 wherein the wavelength-conversion region includes fluorescent particulates (FIG. 1, item 36) to scatter the first light and the second light that propagate through the wavelength-conversion region.

Regarding claim 18, Takahashi discloses the device of claim 14 wherein the wavelength-conversion region is configured to substantially enclose the semiconductor die over a surface on which the semiconductor die is positioned (FIG. 1).

Regarding claim 19, Takahashi discloses the device of claim 18 wherein the wavelength-conversion region is positioned on the semiconductor die such that the semiconductor die is covered by the wavelength-conversion region (FIG. 1).

Regarding claim 20, Takahashi discloses the device of claim 14 wherein the wavelength-conversion region is configured as a planar layer positioned over the semiconductor die (FIG. 1).

***Response to Arguments***

Applicant's arguments filed May 19, 2006 have been fully considered but they are not persuasive. Applicant's respectfully traverses the rejection of Takahashi et al., specifically that the reference does not disclose the limitations of "a fluorescent layer" and "a wave-length conversion region", as claimed by Applicant. The Examiner respectfully disagrees with Applicant's remarks. Takahashi discloses that the wavelength conversion region (item 35) "CAN BE OMITTED" (paragraph 97) with the fluorescent layer (item 37). The Examiner notes that Takahashi teaches that the wavelength conversion region can be kept since it can be omitted. Furthermore, Takahashi merely suggests that the fluorescent layer and the wavelength conversion region be present in the same embodiment by saying that the region "can be omitted". The Examiner notes that it is within the teachings of the applied art to have the fluorescent layer and wavelength conversion region configured in the same structure, as suggested by Takahashi.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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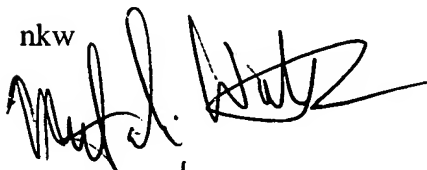
however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalie K. Walford whose telephone number is (571)-272-6012. The examiner can normally be reached on Monday-Friday, 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571)-272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

nkW  
  
8/4/06

  
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